

IN THE CLAIMS:

Kindly replace the claims of record with the following full set of claims:

1. (Currently amended) A method of processing a skin print image, and particularly a fingerprint image, which image exists as a gray-level image, comprising:
~~characterized in that~~ convolving the gray-level image is convolved in the direction of two axes (x, y) by generalized gradient filters, wherein the generalized gradient filters each constitute the superimposition of a two-dimensional Gaussian bell curve and a suitably enlarged gradient filter, the size of each of which is adjusted to suit the average density of the furrows in the skin print image; normalizing the generalized gradients obtained in this way are normalized, convolving each of the normalized, generalized gradients are each convolved with said generalized gradient filters, summing and the sum of the two results of the convolution of the normalized, generalized gradients; and
converting the results of the convoluted, normalized, generalized gradients is converted to binary form.

2. (Cancelled)

3. (Currently amended) A method as claimed in claim 1, ~~wherein~~ characterized in that, to enable a region of interest of a skin print image to be determined from the generalized gradients, items of length information are obtained that are compared with a preset length and, if the preset length is exceeded, ~~the given~~ a corresponding pixel is designated as belonging to the region of interest.

4. (Currently amended) An arrangement for processing a skin print image, and particularly a fingerprint image, which image exists as a gray-level image, comprising: a signal processing means in communication with a memory containing a program, which when accessed by the signal processing means causing the signal processing means to execute; ~~characterized by means for~~

convolving the gray-level image in the direction of two axes (x, y) by generalized gradient filters to obtain generalized gradients, wherein the generalized gradient filters each constitute the superimposition of a two-dimensional Gaussian bell curve and a suitably enlarged gradient filter, the size of each of which is adjusted to suit the average density of the furrows in the skin print image;

normalizing the generalized gradients ~~obtained in this way,~~

convolving each of the normalized, generalized gradients with said generalized gradient filters, ~~and~~

converting the sum of the two results of the convolution of the normalized, generalized gradients to binary form;

obtaining items of length information from the generalized gradients,

for comparing these item of length information with a preset length and,

if the preset length is exceeded, for designating the given-designating a corresponding pixel as belonging to the a region of interest

5. (Cancelled)

6. (Cancelled)